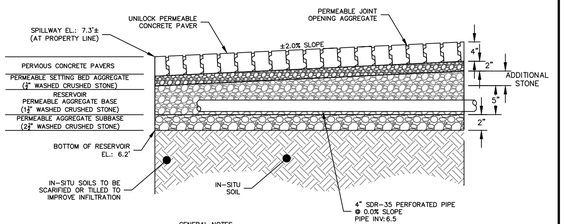
PERVIOUS CONCRETE PAVERS



GENERAL NOTES

1. PERMEABLE CONCRETE PAVERS BY UNILOCK OF SHELTON, CT
2. REFER TO UNILOCK'S CURRENT RECOMMENDED INSTALLATION GUIDELINES FOR PERMEABLE CONCRETE PAVERS.
3. ALL PAVERS AND STONE RESERVOIR MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
4. FOR ALL AGGREGATES, PROVIDE WASHED, CLEAN HAVE ZERO PLASTICITY, FREE FROM DELETERIOUS OR FOREIGN MATTER, CRUSHED ANGULAR ROCK AND CONTAIN NO No. 200 SIEVE SIZE AGGREGATE MATERIALS USED IN THE CONSTRUCTION OF PERMEABLE PAVEMENT.

GENERAL NOTES

1. BUILDING FOOTPRINT IS BASED OFF OF DRAWINGS OBTAINED FROM THE OWNER AND/OR ARCHITECT. CONTRACTOR SHOULD REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS & ACTUAL LOCATIONS OF UTILITY ENTRANCES.
2. LOCATION OF ALL UNDERGROUND UTILITIES DEPICTED HEREON ARE APPROXIMATE AND ARE BASED ON FIELD LOCATION OF VISIBLE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATER GATES, ETC., AND COMPILING INFORMATION FROM PLANS SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES AND GOVERNMENT AGENCIES. ALL CONTRACTORS ARE REQUIRED BY STATE REGULATIONS TO CONTACT CALL-BEFORE-YOU-DIG AT 1-800-922-4455 FOR LOCATION AND STAKEOUT OF UTILITIES PRIOR TO ANY EXCAVATION.
2. IF THERE ARE ANY VARIATIONS ON THIS MAP WITH WHAT IS FOUND OR DESIRED IN THE FIELD, THE CONTRACTOR SHALL CONTACT AND NOTIFY THE SITE ENGINEER IMMEDIATELY PRIOR TO COMMENCING THE RELATED WORK TO DETERMINE THE CORRECT COURSE OF ACTION.
3. B&B ENGINEERING, LLC MAKES NO GUARANTEE WITH THIS PLAN UNLESS B&B INSPECTS ALL ASPECTS OF CONSTRUCTION.
4. MAP REFERENCES
   BOUNDARY AND TOPOGRAPHIC INFORMATION OBTAINED FROM A MAP ENTITLED "IMPROVEMENT LOCATION SURVEY PREPARED FOR 233 LLC, 233 HILLSPOINT ROAD, WESTPORT, CONNECTICUT," DATED 9/17/2014, PREPARED BY J. EDWARDS & ASSOCIATES, LLC. EASTON, CONNECTICUT.

   SOIL TEST DATA OBTAINED FROM A REPORT ENTITLED "GEOTECHNICAL ENGINEERING REPORT; 233 HILLSPOINT ROAD, WESTPORT, CONNECTICUT; PREPARED FOR GIBBY COHEN 233 HILLSPOINT ROAD" DATED 6/2015, PREPARED BY HELLER AND JOHNSEN-A GZA GEOENVIRONMENTAL, INC. DIVISION, STRATFORD, CONNECTICUT.

GRADING & DRAINAGE NOTES

1. ABBREVIATIONS
   PVC = POLYVINYL CHLORIDE PIPE (SDR-35)
   HDPE = HIGH DENSITY POLYETHYLENE PIPE
   RCP = REINFORCED CONCRETE PIPE
   MH = MANHOLE
   CB = CATCH BASIN
   INV = INVERT
   LF = LINEAR FEET
   ACCMP = ASPHALT COATED CORRUGATED METAL PIPE
   HERCP = HORIZONTAL ELIPTICAL REINFORCED CONCRETE PIPE
2. THE CONTRACTOR SHALL FLUSH AND CLEAN ALL EXISTING ON-SITE STORM PIPING AND STRUCTURES THAT ARE TO BE MAINTAINED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING THE DRAINAGE STRUCTURES FOR THE INDICATED PIPE CONNECTIONS.
4. THE PIPE LENGTHS SHOWN ARE APPROXIMATE.
5. ALL PROPOSED CATCH BASINS SHALL HAVE A 2' SUMP, UNLESS OTHERWISE SPECIFIED.
6. ALL SLOPES TO BE NO GREATER THAN 5' HORIZONTAL TO 1' VERTICAL.

DETENTION CALCULATIONS

DESIGN CRITERIA:
DETAIN AND INFILTRATE 1" RUNOFF

TOTAL IMPERVIOUS AREA:

DWELLING:	1,411 S.F.
STAIRS:	144 S.F.
DRIVEWAY:	936 S.F.
WALKS:	474 S.F.
MECH. EQUIP:	36 S.F.
STEPPING STONES:	344 S.F.
TOTAL:	3,345 S.F.

STORAGE REQUIRED:
3,345 SF ((1.0 IN.)/12 IN./FT.) = 278.75 CF

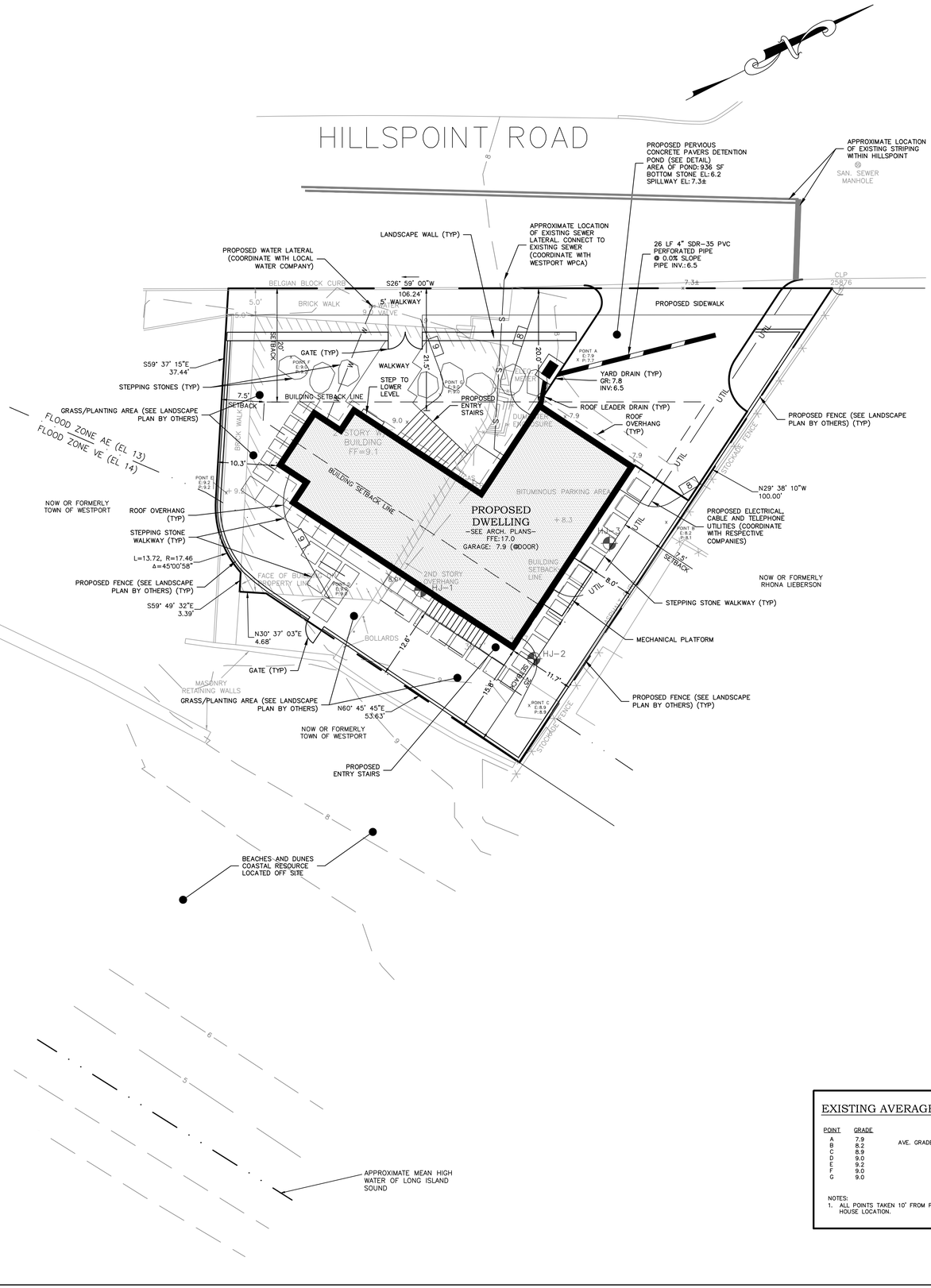
STORAGE PROVIDED
PERMEABLE PAVER AREA: 936
4" PERVIOUS PAVER (0.2 VOID RATIO)
7" CRUSHED STONE (0.4 VOID RATIO)
936 SF X 4"X(1'/12") X 0.2 = 62.4 CF
936 SF X 7"X(1'/12) X 0.4 = 218.4 CF
TOTAL STORAGE PROVIDED: 280.8 CF

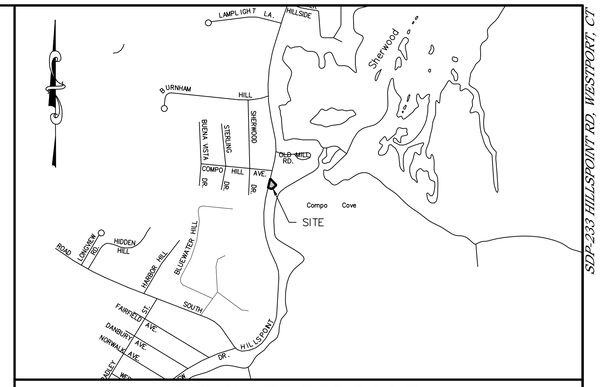
STORM WATER QUALITY CALCULATION:
PERCENT IMPERVIOUS COVER (I) = 58.1%
VOLUMETRIC RUNOFF COEFFICIENT (R) = 0.05 + 0.009(58.1) = 0.573
AREA OF SITE (A) = 0.132 ACRES
WQV= (1"(R)(A))/12 = (1"(0.573)(0.132))/12= 274.5 CF REQUIRED
AS DESIGNED, THE INFILTRATION SYSTEM HAS A TOTAL CAPACITY OF 280.8 CF, WHICH EQUATES TO 102.3% OF THE WQV.

TEST BORING RESULTS

SOIL BORING DATA OBTAINED FROM TEST BORING REPORTS
PREPARED BY HELLER & JOHNSEN/GZA, TESTED ON 5/7/2015

	HJ-1	HJ-2	HJ-3
GROUNDWATER DEPTH:	7.0'	7.0'	6.5'





LOCATION MAP
SCALE: 1"=800'

SITE STATISTICS
SINGLE FAMILY DWELLING

ZONING DISTRICT "B"	REQUIRED	PROVIDED
BULK STATISTICS		
MIN. LOT AREA	6,000 S.F.	5,757 S.F.
MIN. LOT SHAPE	60'x80'	<60'x80'
MIN. BUILDING SETBACK (FRONT)	20'	20.0'
MIN. BUILDING SETBACK (SIDE)	7.5'	10.3'
MIN. BUILDING SETBACK (REAR)	25'	12.6'
MAX. HEIGHT	26'+X= X=BFE-AVERAGE GRADE X=12'-b	2 STORY/<35'
MAX. BUILDING COVERAGE	15% (863 S.F.)	DWELLING: 1,411 S.F. FRONT ENTRY: 92 S.F. REAR STAIRS: 52 S.F. LOWER LEVEL STEP: 3 S.F. TOTAL: 1,558 S.F. (27.1%)
MAX. TOTAL COVERAGE	35% (2,015 S.F.)	BUILDING COVERAGE: 1,558 S.F. DRIVEWAY: 938 S.F. TOTAL: 2,496 S.F. (43.4%)

LOT AREA COVERAGE CALCULATION

BASE LOT CALCULATION (ALL ENTRIES IN SQUARE FEET)				
1	GROSS LOT AREA			= 5,757 SF
2	ABOVE-GROUND UTILITY EASEMENTS	=	0 SF	
3	STREET AND ROAD	=	0 SF	
4	OTHER EXCLUSIVE SURFACE EASEMENT	=	0 SF	
5	TOTAL EASEMENTS AND ROADS (Sum of Lines 2, 3 and 4)			= 0 SF
6	WETLAND AREA	=	0 SF	
7	STEEP SLOPES OF 25% OR GREATER	=	0 SF	
8	TOTAL WETLANDS/SLOPES (Sum of Line 6 & 7)	=	0 SF	
9	WETLANDS/SLOPES REDUCTION	0.8 x LINE 8		= 0 SF
10	BASE LOT AREA (Lines 1, Minus Line 5 and Line 9)			= 5,757 SF
MAXIMUM LOT AREA COVERAGE CALCULATION				
11	BASE LOT AREA (Copied from line 10, above)	=	5,757 SF	
12	SQUARE FEET OF TOTAL COVERAGE			= 2,496 SF
13	LINE 12 DIVIDED BY LINE 11 FOR A PERCENTAGE			= 43.4%
14	SQUARE FEET OF BUILDING COVERAGE			= 1,558 SF
15	LINE 14 DIVIDED BY LINE 11 FOR A PERCENTAGE			= 27.1%

SINCE LINE 13 AND LINE 15 IS GREATER THAN THE PERCENTAGE FOR MAXIMUM PERMITTED COVERAGE WITHIN THE ZONING DISTRICT, THE COVERAGE REQUIRES A VARIANCE.

LEGEND

■ C.H.D.	Conn. Hwy. Dept. Monument	OW.G.	Water gate valve
■ Mon.	Monument	OG.G.	Gas gate valve
●	Iron Pin to be Set	W	Water main (existing)
■	Conc. Monument to be Set	W	Water main (proposed)
● I. Pipe	Iron Pipe		Hydrant
● I.P.	Iron Pin	WS	Water service lateral
○ D.H.	Drill Hole	G	Gas Main (existing)
	Pile of Stones	G	Gas main (proposed)
○ F.P.	Fence Post	SS	Sanitary sewer lateral
Fnd.	Found	S	Sanitary Sewer Main (existing)
n/f	Now or Formerly	S	Sanitary Sewer Main (proposed)
	Property Line		Stone Wall
	Property Line (adjoining)		Barbed Wire Fence
	Building Setback Line		Retaining Wall
	Easement Line		Fence
	Centerline		Utility Pole
	Ledge or Boulders		Existing Manhole
	Earth or gravel fill		Proposed Manhole
	Existing Spot Elevation		Existing Catch Basin/Pipe
x123.4	Proposed Spot Elevation		Proposed Storm Pipe
INV.	Invert Elevation of Pipe		Proposed Catch Basin
HJ-1	Test Boring Number		Building (existing)
	Test Boring Location		

	Evergreen Tree
	Deciduous Tree
	Swamp or Wetlands
	Watercourse
123	Existing Contours
[123]	Proposed Contours
R.C.P.	Reinforced Concrete Pipe
C.M.P.	Corrugated Metal Pipe
○ PT A	Percolation Test Location
◆ TP 100	Deep Test Pit Location
	Stone Retaining Wall
	Retaining Wall
	Wetland Limit
WL100	Wetland Flag Number
	Wetland Setback
	Benchmark
	Silt Fence
	Well (existing)
	Well (proposed)
	Anti-Mud Tracking Pad

EXISTING AVERAGE GRADE

POINT	GRADE
A	7.9
B	8.2
C	8.9
D	9.0
E	9.2
F	9.0
G	9.0

AVE. GRADE = $\frac{\Sigma(A...G)}{(7)}$ =8.7'

NOTES:
1. ALL POINTS TAKEN 10' FROM PROPOSED HOUSE LOCATION.

PROPOSED AVERAGE GRADE

POINT	GRADE
A	7.7
B	8.1
C	8.9
D	9.0
E	9.2
F	9.2
G	9.0

AVE. GRADE = $\frac{\Sigma(A...G)}{(7)}$ =8.7'

NOTES:
1. ALL POINTS TAKEN 10' FROM PROPOSED HOUSE LOCATION.

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3.	7/2/2018	SOIL EROSION & SEDIMENT CONTROL PLAN
2.	5/9/2018	PLANTING AND WALKWAY REVISION
1.	3/23/2018	REVISED REAR SETBACK DIMENSION

SCALE: 1"=10'
0 5 10 20 30

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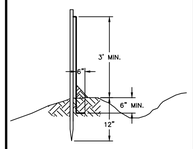
SITE DEVELOPMENT PLAN
OF
233 HILLSPOINT ROAD
WESTPORT, CONNECTICUT
PREPARED FOR
PEN BUILDING COMPANY
46 POST ROAD EAST
WESTPORT, CONNECTICUT 06880

TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.
STATE OF CONNECTICUT BRYAN P. NESTERIAK 23556 REGISTERED LAND SURVEYOR
BRYAN P. NESTERIAK, P.E.,L.S. 23556

Date	3/2/2018
Scale	1"=10'
Job No.	839
Drawing No.	1 of 2

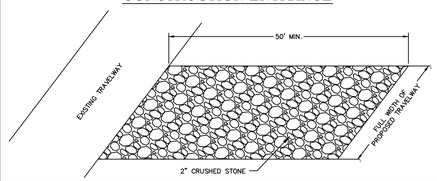
SDP-233 HILLSPOINT RD, WESTPORT, CT

SILT FENCE



INSTALLATION NOTES:
1. EXCAVATE AND SECURE BOTTOM 8" OF SILT FENCE BELOW GRADE AS SHOWN.
2. EXCEPT FOR THE END POST, DRIVE ALL POSTS INTO THE GROUND AT BACK SIDE OF TRENCH SPACED A MAXIMUM OF 10 FT O. C.

CONSTRUCTION ENTRANCE



SEDIMENTATION & SOIL EROSION SPECIFICATIONS

1. THESE GUIDELINES SHALL APPLY TO ALL WORK CONSISTING OF ANY AND ALL TEMPORARY AND OR PERMANENT MEASURES TO CONTROL WATER POLLUTION AND SOIL EROSION AS MAY BE REQUIRED, DURING THE CONSTRUCTION OF THE PROJECT.

2. ALL CONSTRUCTION ACTIVITIES SHALL PROCEED SO THAT POLLUTION OF ANY WETLANDS, WATERCOURSES, WATERBODY, AND OR CONDUIT CARRYING WATER, ETC. DOES NOT OCCUR. THE CONTRACTOR SHALL LIMIT, INSOFAR AS POSSIBLE, THE SURFACE AREA OF EARTH MATERIALS EXPOSED BY CONSTRUCTION METHODS AND IMMEDIATELY PROVIDE PERMANENT AND TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT WETLANDS, WATERCOURSES AND WATERBODIES, AND TO PREVENT, INSOFAR AS POSSIBLE EROSION ON THE SITE.

3. CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" (2002) BY THE STATE OF CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION.

IMPLEMENTATION NOTES

1. THE EROSION AND SEDIMENTATION CONTROL MEASURES ARE TO BE INSTALLED PRIOR TO CONSTRUCTION WHENEVER POSSIBLE. ALL CONTROL MEASURES ARE TO BE MAINTAINED IN AN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. ADDITIONAL MEASURES ARE TO BE INSTALLED IF NECESSARY OR REQUIRED DURING CONSTRUCTION PERIOD.

2. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM. RESTABILIZATION TO BE SCHEDULED AS SOON AS PRACTICAL.

3. POST AND FABRIC SILTATION BARRIERS SHALL BE INSTALLED AT THE TOE OF ALL CRITICAL CUT AND FILL SLOPES. SILT FENCES AND BARRIERS MUST BE CLEANED OR REPLACED WHEN SOIL HAS REACHED ONE–THIRD THE HEIGHT OF THE FENCE.

4. ALL STORM DRAINAGE OUTLETS MUST BE STABILIZED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.

5. SEDIMENT TRAPS, IF APPLICABLE, MUST BE CLEANED WHEN CAPACITY HAS BEEN REDUCED BY AN AVERAGE OF 2" OVER ITS TOTAL AREA OR TO 80% OF ITS DESIGN VOLUMES, WHICHEVER OCCURS FIRST.

6. SEDIMENT REMOVED FROM THE CONTROL STRUCTURES SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH THE INTENT OF THE PLAN AND IN ACCORDANCE WITH LOCAL, STATE, & FEDERAL REGULATIONS.

7. FILL MATERIAL SHALL BE FREE FROM DEBRIS PERISHABLE OR COMBUSTIBLE MATERIAL AND FROZEN OR WET EARTH OR STONES LARGER THAN 6 INCHES IN MAXIMUM DIMENSION. FILL SHALL BE PLACED IN MAXIMUM 12 INCH LOOSE LIFTS AND COMPACTED TO WITHIN 90% OF THE MODIFIED PROCTOR TEST RESULT.

8. PAVEMENT BASE COURSE MUST BE PLACED IN ALL PROPOSED PAVEMENT AREAS UPON COMPLETION OF FINE GRADING.

9. PERMANENT LANDSCAPED AREAS SHALL BE SEEDED OR SODDED ON ALL EXPOSED AREAS IMMEDIATELY AFTER FINAL GRADING. MULCH AS NECESSARY FOR SEED PROTECTION AND ESTABLISHMENT. LIME AND FERTILIZE PRIOR TO PERMANENT SEEDING.
   - 9.1. TOPSOIL PREPARATION:
     - 9.1.1. TOPSOIL SHOULD BE A MINIMUM OF FOUR INCHES DEEP (COMPACTED) BEFORE SEEDING.
     - 9.1.2. HAVE TOPSOIL TESTED FOR PH. ADD LIME AS NECESSARY TO ACHIEVE PH OF 6.5. APPLY FERTILIZER AT A RATE OF 300 POUNDS PER ACRE OR SEVEN POUNDS PER 4,000 SQUARE FEET USING 10–20–10 OR EQUIVALENT. IN ADDITION, 300 POUNDS 38–0–0 PER ACRE OF SLOW RELEASE NITROGEN MAY BE USED IN LIEU OF TOP DRESSING.
     - 9.1.3. WORK LIME AND FERTILIZER INTO SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF FOUR INCHES WITH A DISC, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE ALL CLAY OR SILTY SOIL AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEED BED WHEREVER FEASIBLE.
     - 9.1.4. REMOVE FROM THE SURFACE ALL STONES ONE INCH OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMP, OR OTHER UNSUITABLE MATERIAL.
     - 9.1.5. INSPECT SEED BED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT SOIL COMPACT, THE AREA MUST BE RE–TILLED AND COMPACTED AS ABOVE.
   - 9.2. SEED MIXTURE (APPLY AT A RATE OF 200 POUNDS/ACRE):
     - 9.2.1. 10% KENTUCKY BLUEGRASS – BARON MIX
     - 9.2.2. 20% PERENNIAL RYEGRASS
     - 9.2.3. 70% TURF TYPE TALL FESCUE

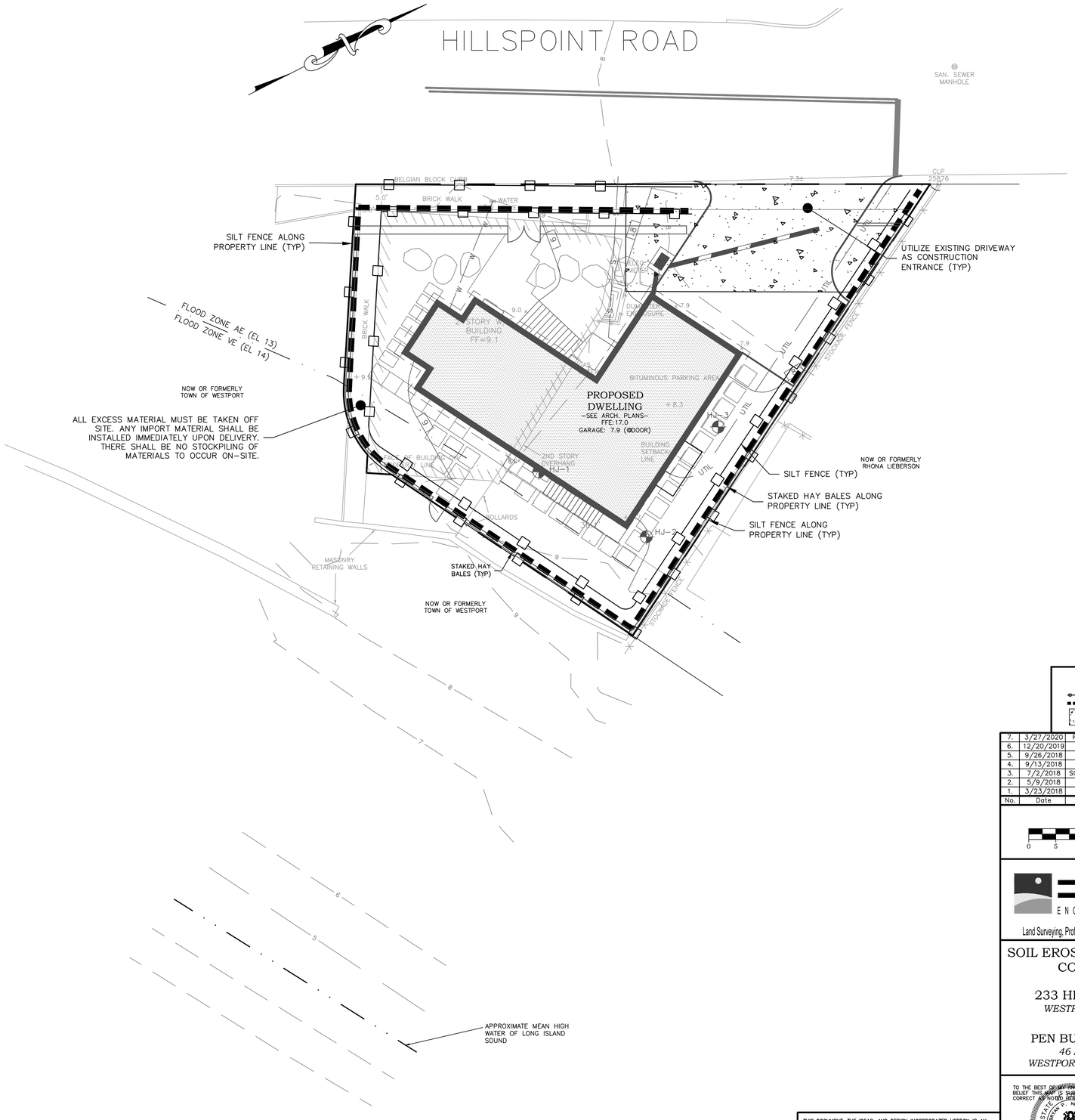
10. THE CONTRACTOR/OWNER IS RESPONSIBLE FOR ALL PAVED ROADWAYS ON AND OFF SITE AND MUST ENSURE THE SITE IS FREE OF SITE GENERATED SEDIMENT AT ALL TIMES. DUST SHALL BE CONTROLLED BY SPRINKLING OR ANOTHER APPROVED METHOD.

11. ALL EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSPECTED ON A DAILY BASIS AND CLEANED IMMEDIATELY AFTER EACH STORM.

12. WHERE DEWATERING IS NECESSARY, THERE SHALL NOT BE A DISCHARGE DIRECTLY INTO WETLANDS OR WATERCOURSES. PROPER METHODS AND DEVICES SHALL BE UTILIZED TO THE EXTENT PERMITTED BY LAW, SUCH AS PUMPING WATER INTO A TEMPORARY SEDIMENTATION STRUCTURE OR BOWL, PROVIDING SURGE PROTECTION AT THE INLET AND THE OUTLET OF PUMPS, OR FLOATING THE INTAKE OF THE PUMP, OR OTHER METHODS TO MINIMIZE AND RETAIN THE SUSPENDED SOLIDS. IF PUMPING OPERATION CAUSES TURBIDITY PROBLEMS, THE OPERATION SHALL CEASE UNTIL FEASIBLE MEANS OF CONTROLLING TURBIDITY ARE DETERMINED AND IMPLEMENTED.

13. THE RESPONSIBILITY FOR: IMPLEMENTING THE EROSION AND SEDIMENT CONTROL PLAN, INFORMING ALL CONCERNED OF THE REQUIREMENT OF THE PLAN; NOTIFYING THE PLANNING AND ZONING COMMISSION, ITS DESIGNATED REPRESENTATIVE OF ANY TRANSFER OF RESPONSIBILITY AND SEEING THAT A COPY OF THE PLAN IS RECEIVED BY ANY SUCCESSOR IN INTEREST TO THE TITLE OF THE LAND OR ANY PORTION THEREOF IS ASSIGNED TO THE OWNER OF RECORD.

14. ANY CONVEYANCE OF THIS PROJECT PRIOR TO ITS COMPLETION, WILL TRANSFER FULL RESPONSIBILITY FOR COMPLIANCE WITH THE CERTIFIED PLAN TO ANY SUBSEQUENT OWNERS.



LEGEND

- SILT FENCE
- STAKED HAYBALES
- ANTI–MUD TRACKING PAD

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SDP-233 HILLSPOINT RD, WESTPORT, CT